Lower Sheepscot River Tidal Marshes

Description:

The Sheepscot River in Alna and Newcastle has long been recognized as an area of ecological significance. From north to south, the river's habitats grade from freshwater riverine in Alna Village, to freshwater tidal near Dock Road, to brackish and salt marshes further downriver. This largely intact corridor of fresh, brackish, and salt marshes, though well represented nearby in the Kennebec estuary, is uncommon elsewhere in Maine. Moreover, the Sheepscot River wetland complex supports nesting bald eagles, several rare plant species, a rare freshwater mussel species, and uncommon salt marsh sparrows.

In the upper section of the river, dominant freshwater marsh plants include pickerelweed (*Pontederia cordata),* arrow-head (*Sagittaria latifolia*) and bulrushes (*Schoenoplectus pungens* and *S. tabernaemontanii*). Further to the south, dominant salt-marsh species include salt-marsh bulrush (*Bolboshoenus maritimus),* cordgrass *(Spartina alterniflora),* and salt hay (*Spartina patens*). The sharpest area of transition is through 1/4 mile of shallow stream riffles, where the river grade drops a few feet. Rare plants are scattered throughout the muddy riverbanks of this freshwater tidal section, from Dock Road in Alna southward for over a mile.

The freshwater portion of the River, within and upstream of Alna village, also supports the globally uncommon **brook floater** mussel (*Alasmidonta varicosa*). Brook floaters were found in two locations and may occur where suitable gravel/cobble habitat exists in the River. Currently listed as a Special Concern species in Maine, the brook floater is very uncommon and rarely found in abundance at any site. It is also declining throughout its range, and Maine may hold some of the last best populations of this species.

Deer Meadow Brackish Marsh *MNAP file photo, Lisa Windhausen*

Further to the south the Sheepscot River is joined by Dyer Brook and the Marsh River. At the head of the Marsh River, the Deer Meadow **brackish tidal marsh** is a 150-acre wetland that supports nearly 1,000 of the rare **salt marsh false foxglove** ***(Agalinis maritima)*** plants in several small sub-populations. Other typical salt and brackish marsh plant species include black rush (*Juncus gerardii),* the sedge *Carex paleacea,* common arrow-grass *(Triglochin maritimum*), saltmarsh bulrush *(Bolboschoenus maritima),*common three-square *(Schoenoplectus pungens),* silverweed *(Argentina anserina*), and saltmeadow cordgrass. Smooth cordgrass lines the banks of the marsh and gives the appearance of monotypic stands. A few roadside homes can been seen near the forested edge of the marsh.

In addition to the area's significance as rare plant and mussel habitat, it also supports rare bird species. Two **bald eagle** (*Haliaeetus leucocephalus*) nests have been active between the Sheepscot Reversing Falls and railroad bridge. *(need details from C. Todd here..)* Moreover, two brackish tidal marshes here (Dyer River marsh and Deer Meadow marsh) were found by MDIFW biologists to support both the **salt marsh sharp-tailed sparrow** ***(Ammodramus caudacutus)*** and Nelson's sharp-tailed sparrow (*Ammodramus nelsoni*). Both bird species are uncommon in Maine -- the former may be somewhat rarer -- and both are restricted to salt and brackish marshes. MDIFW biologists also detected nearly 20 other species in these salt marshes.

Rare Species/Natural Communities Table for the Sheepscot River Tidal Marshes:

Common name	Latin Name	State	S-RANK	G-RANK	Habitat
Exemplary Natural Communities					
Brackish tidal marsh		n/a	S3	not ranked	Tidal marsh
Rare Plants					
Saltmarsh false foxglove	*Agalinis maritima*	SC	S2	G5	FW tidal marsh
Estuary bur-marigold	*Bidens hyperborea*	SC	S3	G4	FW tidal marsh
Parker's pipewort	*Eriocaulon pakeri*	SC	S3	G3	FW tidal marsh
Mudwort	*Limosella australis*	SC	S3	G4G5	FW tidal marsh
Threadfoot	*Podostemum ceratophyllum*	SC	S2	G5	Riverine
Spongy arrowhead	*Sagittaria calycina*	SC	S3	G5	FW tidal marsh
Rare Animals					
Brook floater	*Alasmidonta varicosa*	SC	S3	G3	Riverine
Salt marsh sharp-tail sparrow	*Ammodramus caudacutus*	not listed	S3B	G4	Salt marshes
Bald eagle	*Haliaeetus leucocephalus*	T	S4B/S4N	G4	

Other Resources Mapped by MDIFW:

Most of the area described here is mapped as a Coastal Waterbird Concentration Area, and a small area below the reversing falls is mapped as a Shorebird Feeding Area.

Conservation Considerations:

- Although most of the rivershore below the Dock Road Bridge is narrow and without much marsh expanse, it is undeveloped and devoid of invasive species.

- In general, threats to aquatic plants and invertebrates include hydrologic alteration (from changes in water flow or impoundment of waterways), point source pollution, development of adjacent uplands and associated water quality impacts, invasive species such as purple loosestrife, and poor timber harvesting practices.

- Potential impacts from residential, commercial, and industrial development of the shoreline are all greatest where road access and town zoning are favorable to such development.

- With regard to timber harvesting, strict adherence to Shoreland Zoning guidelines and Maine Forest Service Best Management Practices should help to minimize impacts to adjacent wetlands. In some areas of steep slopes or susceptible soils, it may be wise to avoid harvesting entirely within the shoreland zone.

- Freshwater mussels are very sensitive to contaminants and changes in habitat. Maintenance and/or improvement of water quality and habitat integrity via protection of riparian buffers is essential. Any activities that may potentially degrade water quality or alter habitat type (including substrate, flow rate, water levels) should be avoided. Likewise, because larval freshwater mussels require a specific fish host, activities that may result in changes to the fish community or prevent access by fish should be avoided. Another potential threat is introduction of exotic species, such as the zebra mussel, which can out-compete and decimate native mussel populations. The local public should be educated on how to prevent accidental introduction of this invasive species into the Sheepscot River watershed. Finally, an outreach program for freshwater mussel conservation in the Sheepscot River watershed would be extremely beneficial to the conservation of freshwater mussels.

- Appropriate conservation strategies include tree growth and open space tax treatments, conservation easements, and fee ownership.

- Bald eagles are no longer listed under the federal Endangered Species Act, and the state intends to re-classify the species in 2001. Nonetheless a "safety net" of habitats in conservation ownership and an array of sites managed by cooperative landowner agreements are key safeguards to a lasting recovery of eagles. In coastal Maine, seabirds and waterfowl are prevalent in bald eagle diets. The adjacency of suitable foraging areas to eagle nesting habitat is an important consideration. (*add specifics about these nests -- C. Todd*)

Protection Status:

Within this area of the Sheepscot River there is no land in public or private conservation ownership. The SVCA holds easements on a small number of shoreline parcels.